

Year in Review 2007
Utah Oil & Gas Program
Presented to the Board of Oil, Gas and Mining
February 2008

Overview:

The calendar year 2007 proved to be another extremely busy one for oil and gas in Utah. The Division again broke records in response to the high industry activity level. Product demand continued to grow and so did Utah's production. Utah's oil and gas industry continued to do their part in supplying oil and natural gas to the nation.

The state of Utah is currently ranked 12th in the country in crude oil production and 10th in natural gas production (not including Federal Offshore production areas). In 2007, there were approximately 7,500 producing wells in Utah, up 17% from 2006 and up 48% from 2003. Oil production during January thru September totaled 14,608,914 barrels, up about 9% from the same time period in 2006 and up 46% from 5 years ago. Natural gas production was also up about 12% from a year ago (January thru September) and 35% from 2003 with a volume of 291,557,613 mcf (thousand cubic feet). Total year-end production for 2007 is being estimated at about 19,500,000 barrels of oil and 406,500,000 mcf of natural gas. This would make 2007 the highest oil producing year in Utah since 1997 and the highest natural gas producing year on record.

Further development of waterfloods in the Monument Butte-Pariette Bench area, drilling at Brundage Canyon and surrounding area, west-Altamont/Cedar Rim area showed renewed interest, and others added to the state's oil output. Interest continued in the hingeline play in south central Utah. Deep gas drilling continued in the Natural Buttes area and throughout the Uinta Basin, with Mesozoic Formations continuing to be deserving targets southward in the east and west Tavaputs areas. Many of these wells are targeting the deeper Mesa Verde, Mancos, and Dakota formations in addition to the Wasatch formation. These deeper targets are also being developed in the heretofore primarily oil producing area of Wonsits Valley south of Vernal. The Book Cliffs area on the borders of Uintah and Grand counties and Duchesne and Carbon counties has seen a resurgence in deep gas plays in part due to the high gas prices and accrual of 3D seismic information.

Step-out, Infill and Horizontal Oil Well Developments are occurring in the Uinta Basin. Successful step-out wells drilled outside the Brundage Canyon core development area south of Duchesne will ensure continued resource development in the area. Infill drilling in this area as well as areas such as Red Wash, Wonsits Valley, Monument Butte and even the old Gusher Field southwest of Vernal also bring great promise of continued economic development especially in light of the current high oil price. Advancements in directional drilling technology are allowing companies in these areas to drill

horizontally into thin, low permeability formations that were previously uneconomic and also under rivers or in rugged terrain where it may not be possible or acceptable otherwise.

High drilling activity is of course followed by increased Division workload in record keeping, compliance and all the other aspects of our program that follow as our well inventory increases. Both oil and gas production in the state has steadily risen since 2003. From 2005 to 2007, over 5000 permits to drill have been issued in Utah. That is double the amount of permits issued the preceding three years. With the current high oil and gas prices, that trend is expected to continue. The production sales value of crude oil and natural gas in Utah for 2007 is expected to reach nearly \$2.7 billion, an increase of 40% since 2004.

Administration:

Several staff changes occurred during the year. Harold Black long time oil and gas auditor retired. Randy Thackeray was hired as our new lead oil and gas auditor coming to us with both Tax Commission and industry experience. Jean Sweet was hired as our oil and gas executive secretary. She came to us from Human Resources but also has extensive secretarial experience. Major efforts continued in data management and public outreach.

Permitting:

2007 was another big year for oil and gas permitting. 2007 ranked third (2006 - #1, 2005 - #2) for APD approvals and first in the number of well spuds. Permits were issued for drilling, waste disposal facilities, underground injection wells and seismic operations. Many additions/modifications were issued for existing facilities. Our permitting staff continues to coordinate with other State, Federal and local agencies as necessary.

Drilling permits issued: 1,553

UIC permits issued: 23 Conversion approvals 12 Final permits

Permits to construct disposal facilities: 19

Permits to operate disposal facilities: 17

Disposal Pits closed and reclaimed: 1

Seismic permits: 10 permits issued (7 in hingeline play)

3 - 3Ds for 349 square miles

7 - 2Ds for 423 linear miles

Inspection:

A total of 7401 well/site inspections were conducted. There were 222 compliance issues recorded in 2007. One company was responsible for 126 of the total compliance issues involving a total of 21 wells. The majority of the remaining 96 issues have been resolved. Staff also provided oversight for several ongoing contamination cleanup operations at gas plants, compressor sites, or other major spill sites. A breakdown of inspections is as follows:

Audit 113
Casing and cement operations 74
Complaint 11
Compliance verification 240
Drilling 579
Emergency Response 14
Final Restoration/Bond Release 276
MIT's 55
Plugging 382
Presite 428
Production/Environmental (general inspections) 5,059
Workover/Recompletion 119
Seismic 51

Total 7,401

Enforcement:

One of the main objectives of the enforcement program, established in 2004, has been to work with operators that do not respond favorably to the annual SI/TA notice and own wells in violation of R649-3-36 the shut-in well rule. The Division has succeeded in bringing 67 wells, owned by 2 such operators, into compliance with the SI-TA rule. These wells would have cost the Division approximately \$14,325,628.00 to plug and abandon. There are 8 more operators that have not willingly complied with the annual notice SI-TA. These operators own a combined total of 92 wells that are projected to cost \$17,110,619.00 to plug and abandon. The total number of wells removed from the problem wells/operator list in 2007 was 36, 16 in 2006, 9 in 2005, and from 2001 to 2004 was 4.

During 2007 Division field inspectors wrote 147 NOV's in the field, 76 of these are yet to be resolved. Therefore only 49% of the violations written by the field inspectors are being addressed in the same year that they are being issued. 47 NOV's were issued for late reporting, 16 of which will carry over to 2008 as unresolved.

Data Management:

The Oil and Gas Information Services group continued its efforts to keep up with industry during 2007. Despite a drop in permits to drill, other activity increased to record levels. The number of wells spudded (drilling commenced) in Utah increased 5% from the previous year to a record level of 1,119 wells. The count of producing wells is 8% higher than a year ago. Oil production is up 9% and natural gas production is up 12%.

New Oil & Gas Website

A new design of the Oil and Gas Program's website was introduced to the public in October. The goal for this work was to upgrade the appearance of the site, to transition to more up-to-date software, to improve the site's

organization, and to enhance some of the existing features. The new website has been well received by users.

Scanned Well Files

Making more information available to the public in a timely manner continues to be a high priority. All well file scanning has now been transferred to Utah Correctional Industries at the Utah State Prison. This enterprise has met with great results, allowing most incoming well documents to be scanned and available to the public on the division's website within 3 or 4 days of receipt, all done at a very inexpensive price. Approximately 24,000 well files have been scanned with new documents being added daily. All non-confidential files can be viewed by the public on the web.

Scanned Well Logs

The Oil and Gas Program continues to work with TGS Geological Products and Services (formerly A2D Technologies) and the Utah Geological Survey to scan well logs and make them available to the public via the DOGM web site. The scanning of older logs is almost complete. There are now 42,300 log images available.

EPermitting

Work is progressing nicely on a new electronic system that allows oil and gas operators to file for drilling permits through the internet. A few test companies have now successfully submitted permits via ePermit. Programming is moving into final phases in the development of internal work systems that allow Division employees to process permits, track their progress, and return problems and approvals to operators. This system will ultimately reduce the workload for operators and Division employees while speeding up the approval process. During the coming year, work will commence to enhance the system to handle the processing of sundry reports and well completion reports.

Auditing & Bonding:

The auditing and bonding activity for the calendar year 2007 accomplished the following:

- 9 Production/Disposition audits
- 9 Field Inspection Reviews
- 2 Water Disposal Disposition Audits
- 1 Gas Plant Audit
- 3 Production/Disposition Audits were in-process
- 1 Gas Plant Audit was in process
- Monthly and quarterly system edits were in current to the extent possible given reporting delays
- 19 new bonds which included 5 new disposal facilities
- 22 bonds released including 1 disposal facility
- 3 operator bonds replaced

Engineering:

Orphan Well Program

A contract was issued in 2007 to plug 3 wells in the Uinta Basin. One of the wells was a leaking oil well in Duchesne County. This leaking well (circa 1953) was reentered and plugged from a depth of 1600' to surface. The project was completed on October 23, 2007. Cost of this project was approximately \$244,000.00.

Two more wells were plugged in 2007 under project # 2008-01. These were two shallow holes (<50' in depth) in the Crescent Junction area of Grand County. This project was completed on November 28, 2007 at a cost of approximately \$700.00.

SI/TA Program

The 2007 SI/TA program brought 74 of the 289 State or Fee wells in long term SI/TA status (>1 yr SI/TA) into compliance with R649-3-36. The operator either: provided integrity information (18 wells), plugged the wells (34 wells) or returned the wells to production (22 wells). 229 of the 289 wells were carryovers from previous years meaning 60 new wells were added to the list in 2007. The numbers are a bit deceiving as the Division is currently working to bring one operator into compliance that had 82 of the 289 State or Fee SI/TA wells on the list. This operator successfully removed 28 of their wells from the list. In addition, the Division is working on getting updated plans, information and subsequent reports from several other operators.

Fields Review

The engineering staff reviews field designation at the end of each calendar year. The last review, conducted as the result of drilling activity in 2006 was completed in June of 2007. The drilling of 109 productive wells outside of active Field boundaries in 2006, led to the expansion of 26 existing Fields, reactivation of 2 Fields (Agency Draw Field and the Lightning Draw SE Field) and the creation of 1 new Field (Lake Canyon Field). The 2007 field review is underway and should be completed by the end of March 2008.

Work Over Tax Credits

In 2007, the engineering staff reviewed 254 WO tax credits. Of these 254 tax credits, 207 were approved. The total of the approved submitted expenses was \$25,747,656.17. This is not the actual amount of the tax credit, just the amount of the qualifying costs of qualifying work of the workovers. Operators are allowed to take 20% of the qualifying work up to a maximum of \$30,000/year for each well. The majority of the workover tax credit applications were received for workovers done in Natural Buttes Field (66), followed by Monument Butte Field (30), Brundage Canyon Field (27) and Bluebell Field (26).

Sundries, APD's and Miscellaneous

The Engineering group processed hundreds of sundry notices and other miscellaneous requests such as wildcat well determination, flaring approvals, plugging requests, drilling program changes, recompletions and commingling applications. Also provided engineering review of State and Fee APD's.

Public Outreach:

Public outreach by the Oil & Gas program continues. Work continues with National Energy Foundation and others to develop an education program for schools. The Oil and Gas **Think Energy** education initiative with Trust Lands Administration, UPA and the NEF has seen good progress in the last year with the formation of a Central Steering Committee, in February, teacher training classes in early June, and an Energy Super Tour in late June. Teacher training had 25 attendees that are associated with Utah school districts, and the Super Tour attracted about 55 educators from various educational and industry disciplines.

The Uinta Basin Oil & Gas Collaborative Group continues to meet quarterly in Vernal with high participation from agencies, industry and others.

Board Support:

Oil and gas staff provided support and recommendations to the Board. It was a fairly busy year for Board matters including some controversial ones.

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